REMARKS

The Office Action indicated that Claim 7 was allowed and that the subject matter of Claims 5 and 13-15 would be allowed if rewritten in independent form. Claim 5 is now presented as newly drafted independent Claim 18, and accordingly, Claim 18 and dependent Claims 19-21 are believed allowable.

Claim 12 has been amended to incorporate the indicated allowed subject matter of Claim 13, and accordingly, it is believed that Claim 12 and dependent Claims 14-17 are allowable.

Independent Claims 1 and 6 have been amended to further distinguish over the cited art. Claim 8 has been amended to correct a typographical error.

Claims 9 and 10 have been further amended to distinguish over the cited art.

The present invention is seeking to facilitate the joining of an optical fiber bundle so that it can be readily spliced and held for an end-face treatment of a leading edge of the optical fiber bundle with a relatively simple structure. Thus, a connector body can receive a tubular member having a conduit in which the optical fiber bundle extends through the tubular member. An intermediate groove can be provided to enable a pressing force against the optical fiber bundle whereby the optical fiber bundle can be appropriately trimmed at one end of the tubular member and secured. The tubular member can be inserted within the connector body and appropriately secured so that a light transmitting end face of the optical fiber bundle can be utilized.

Claim 1 has been amended to indicate that the tubular member fits over and adjacent a light receiving end portion of the optical fiber bundle whereby the pressing structure can exert a pressing force in a direction perpendicular to a longitudinal direction of the optical fiber whereby the light receiving end portions of the optical fibers are prevented from being separated from each other. In this regard, the dependent Claim 4 further defines the pressing structure as being

located inwardly of an outer periphery of the tubular member. Claim 6 also defines the tubular member that fits over and adjacent a light receiving end portion to prevent the light receiving end portions of the optical fibers from separating from each other.

Claim 8 discloses a method of inserting the optical fiber bundle through a tubular member with an aperture and injecting a predetermined amount of adhesive into the fiber optical bundle through the aperture to hold the optical fibers tightly.

Claim 9 defines the relationship of a connector unit and the tubular member, with the tubular member having an intermediate groove between its opposite longitudinal ends, and the optical fiber bundle extends within the groove so that a pressing member can contact the optical fiber bundle within the groove. In one embodiment of the present invention, the pressing member is an encircling resilient band member that can contract against the optical fiber bundle when released within the groove. Another embodiment, disclosed in Claim 11 and shown in Figure 8, has a semi-cylinder member with a set screw extending through the connector unit. As can be appreciated, this also extends within the groove for applying pressure to the optical fiber bundle.

The Office Action cited the *Fleming et al.* (U.S. Patent No. 4,310,209) for purportedly disclosing an optical fiber holder and contended that a pressing structure was placed inwardly of an outer peripheral tubular member. The tubular member was indicated to be alternatively elements 25, 26 and 23 in the Office Action.

The *Fleming et al.* reference is actually directed to an electrical bundle of wires where a bonding clamp can be used on either side of a distribution cable splice location to provide an electrical continuity. As noted on Column 2, Lines 41-48, this invention purportedly addressed a

need for a connecting device to establish electric continuity of the shield across a cable splice while preventing inadvertent movement of the service wires.

Accordingly, the *Fleming et al.* reference does not teach an optical fiber holder nor does it teach a tubular member for fitting over an optical fiber bundle, and certainly does not teach such a tubular member adjacent a light receiving end portion of the optical fiber bundle to prevent their separation. Referring to Figure 1, element 22 discloses a service wire assembly, while element 21 collectively refers to a clamp. The cross-section of the clamp is shown in Figure 3, while a longitudinal sectional view is shown in Figure 4. Element 25 is the exterior jacket of the distribution cable, while 23 is a shield or sheath about the cable. The shield bonding clamp 31 is inserted underneath the jacket 25 and above the shield 23. An outer service wire clamp forces a plate having tangs 44 downward through the jacket 25 to engage the outer surface of the inner plate 31 and hold it firm. The service wire clamp is secured by bolts so that a clamping force is provided between the inner and outer plates 31 and 32 to prevent the inner plate from slipping from beneath the shield. A conductor 50 or earth ground conductor as shown in Figure 2 can be provided. A pair of clamps can be utilized to extend the splice section where individual wires can be accessed. As can be appreciated, the *Fleming* disclosure does not teach nor suggest positioning or holding fiber optic cables adjacent an end of a light receiving section, nor is there any intermediate groove for receiving a pressing member.

The Office Action attempted to claim that the set screw 36 for holding the service wire portion could constitute the pressing member and vaguely stated that there were semicircular members and resilient members taught by such a disclosure. The Office Action further contended that the there was an entrance opening to the tubular bore surrounded by a beveled surface. Apparently the Office Action is attempting to contend that the outer sheath or jacket

was the tubular member, and then with some inconsistency, contends that the inner shield 23 was, in fact, the tubular member. In any event, the cross-section of Figure 3 shows the shield 21 constitutes the inner plate 31 and an outer plate 32 that simply clamps on one surface of the distribution jacket 25. There is no concern about pressing or holding the individual distribution wires, but rather the concern is to provide a service wire portion that can be clamped and held across a splicing region. There was no concern about the requirement of aligning a light transmitting surface of the end of optical fiber cables as desired in the present invention.

Thus, the *Fleming et al.* reference is not directed to an optical fiber bundle and does not teach the combination of a tubular member, the connector unit and a pressing member adjacent a light receiving portion of a fiber optical bundle.

In order to completely anticipate claims, it is necessary for the reference to clearly disclose each and every claim element. The *Fleming et al.* reference cannot function as an anticipatory reference to support a rejection under 35 U.S.C. § 102(b).

The Office Action further cited the *Ray et al.* (U.S. Patent No. 5,440,665) for combination with the *Fleming et al.* reference to reject Claim 8 as being obvious under 35 U.S.C. § 103.

The *Ray et al.* reference is directed to a fiber optical cable system; however, it fails to provide any teaching reference that would suggest the features set forth in our claims. The Office Action asserted that a last sentence in the Abstract of the *Ray et al.* reference taught securing an optical fiber bundle through an aperture to inject adhesive to hold the optical fiber bundle tightly together.

The *Ray et al.* reference sought to provide a system to permit a relative compact splice closure for enabling drop optical cables to be manufactured with a main optical cable and stored

on the same spool. A fiber splice closure 24 of a flexible nature could also be stored on the spool as shown in Figure 1. A heat shield 37 and a housing 38 can be coiled together to help assist in sealing the use of any drop cables. Clamps can be attached as shown in Figure 4 to the cable sheath 31. These clamps enable an electrical continuity to extend across the splicing section as discussed in Column 2, Lines 7-19.

The only sealing material disclosed is apparently blocking dams 45 and 46 of a foam strip and heat flowing material that can be melded upon application of heat such as the C-shaped pellet members shown as element 48 in Figure 3. There is no teaching of an injectable adhesive for securement of the spliced end of a bundle of optical fibers. This heat flowable material is to provide a sealing of the fiber optical bundle between the splicing clamps. Thus, the *Ray et al.* reference is not teaching an adhesive in the manner disclosed in our present claims such as the method Claim 8, nor does it disclose the combination of a tubular member and a pressing structure in our independent claims. Neither of the references disclose a tubular member with an intermediate groove that permits the fiber optic bundle to extend into the groove. The Office Action's citation of the *Fleming et al.* shield 23 does not teach a groove with any opening to the exterior, but rather teaches a minor depression to accommodate an insertion of the clamp shield 31 under the jacket 25. The clamp shield additionally is exerting a force upward between the inner clamp 21 and the outer clamp 47 to capture the jacket 25, not to exert a force downward to secure fiber optical components adjacent a light receiving surface.

In summary, the *Fleming et al.* reference is directed to an electrical distribution cable so that a wire can be connected between clamps to maintain electrical continuity of the metallic cable shield. The *Ray et al.* reference also wishes to provide a clamp to an outer sheath. It is not concerned with holding a fiber optic bundle that's wrapped around a supporting core 27 in a

position adjacent a light receiving surface for acting as the actual connector in an optical fiber holder. It is only concerned with sealing the cable sheath end portions with C-shaped seal bodies of heat flowable material. Thus, there has been a misinterpretation of the claim elements in the teaching of the *Fleming et al.* and the *Ray et al.* references in the Office Action. Certainly, there is no teaching of an optical fiber bundle holder constituting a connector unit with a tubular member that is fit within the connector unit bore, the tubular member having an intermediate groove with a pressing member extending into the intermediate groove to exert a compressive force to restrain relative movement of the optical fiber bundle, nor is there any teaching of a pressing member being either a resilient, encircling band that can contract when released within the groove or a semi-cylindrical member mounted within the groove for applying pressure.

It is believed that the case is now in condition for allowance, and an early notification of the same is requested.

If the Examiner believes that a telephone interview will help further the prosecution of this case, the Examiner should contact the undersigned attorney at the listed telephone number.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on June 2, 2005.

By: Margaret M. Hasson

Signature

Dated: June 2, 2005

Very truly yours,

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